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New concept for promoting conservation tillage systems

Mahdi Al-Kaisi

Iowa State University, malkaisi@iastate.edu

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INTEGRATED CROP MANAGEMENT

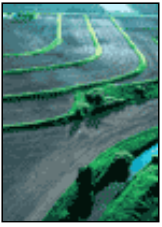
New concept for promoting conservation tillage systems

Conservation systems are critical in reducing sediment and nutrient transport to Iowa's lakes, rivers, and streams. Adopting conservation systems is one of many solutions to water quality problems in the state. The concept for promoting conservation practices through field demonstrations and educational programs is a collaborative effort between Iowa State University Extension and the Division of Soil Conservation through the Integrated Farm and Livestock Management. Partner organizations also include Conservation Districts of Iowa, Iowa Department of Natural Resources, and the Natural Resources Conservation Service. This new concept is called the "Iowa Learning Farm." The map on page 41 shows the five soil districts that make up the model.

The goal of this five-year project is a model for learning and exchanging ideas among farmers, government agencies, and scientists through on-farm demonstration of conservation systems with an emphasis on conservation tillage, cropping systems, and nutrient management across Iowa. Additionally, there will be a prominent education campaign to promote conservation systems across Iowa. The unique thing about this project is the direct involvement of farmers in the decision-making process of implementing conservation practices that are suitable for their production operation in their particular location in the state.

The project will encourage farmers to use efficient agricultural production systems leading to agronomic, economic, and environmental improvement, while tailoring educational activities to support government conservation programs, such as the conservation security program, that are site specific.

An integrated conservation systems approach includes several management practices that improve water quality, soil quality, and wildlife habitat. The use of several conservation practices to reduce deterioration of natural resources is considered a "systems approach" to conservation management. There are many suitable conservation practices that can be implemented such as conservation tillage systems, crop rotations, riparian buffers, filter strips, and cover crops. Implementation of additional conservation practices can enhance the value of other conservation practices. For instance, soil erosion and surface runoff can be controlled by planting row crops on the contour. However, the addition of a filter strip and conversion to no-tillage will greatly increase the effectiveness of the conservation system in controlling runoff and sediment loss.

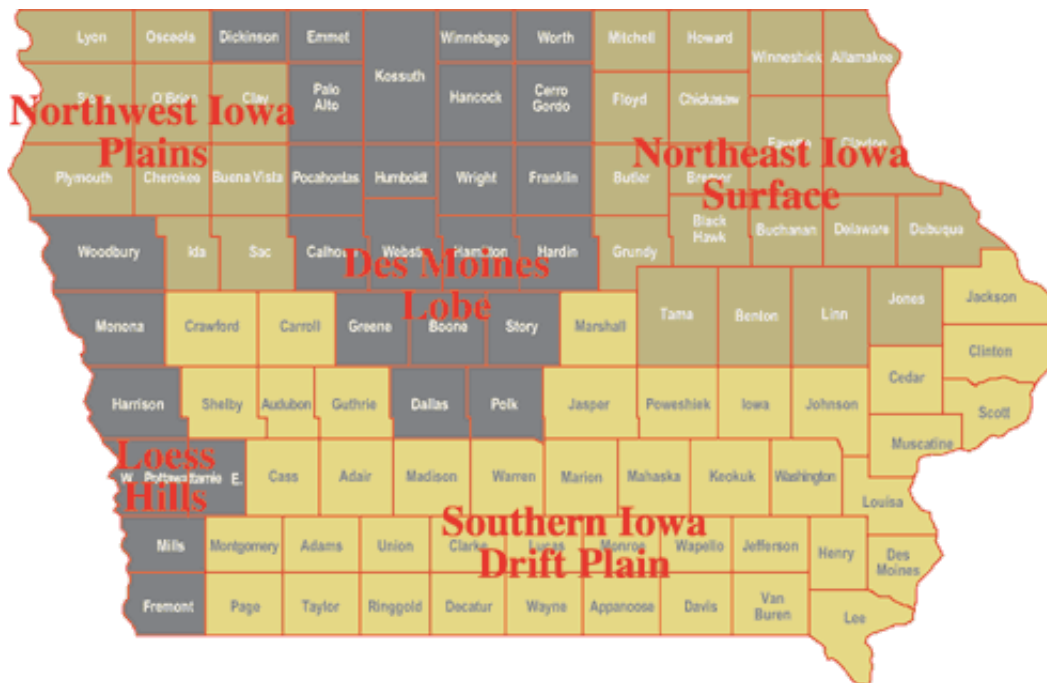


Terraces, conservation tillage, and conservation buffers save soil and improve water quality on this farm in Woodbury County, Iowa. (Natural Resources Conservation Service).

[Enlarge](#) [1]

The increased use of conservation practices, such as no-tillage, ridge-tillage, strip-tillage, and other residue management systems, along with different cropping systems and nutrient management is a comprehensive approach to help farmers attain a higher level of conservation ethics. In addition to environmental quality, conservation practices improve soil properties such as water infiltration, water-holding capacity, nutrient-holding capacity, and soil structure. The improvement of soil properties increases soil tilth and productivity.

More information on the [Iowa Learning Farm](#) [2] is available. For additional information on conservation systems, soil quality, and water quality, see the Resource Conservation Practices publication series, PM 1901a-g, available from the [Iowa State University Extension Distribution Center website](#) [3].



Iowa Learning Farm soil districts.

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<http://www.ipm.iastate.edu/ipm/icm//ipm/icm/2005/3-14-2005/constillage.html>

Links:

[1] <http://www.ent.iastate.edu/imagegal/practices/terracing/terracing.html>

[2] <http://www.extension.iastate.edu/ilf/>

[3] <http://www.ipm.iastate.edu/ipm/icm/www.extension.iastate.edu/pubs/>

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